



PATENT
Docket No.: SYM-0625

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

Group Art Unit: 2151

Examiner: Fourson, Gary S.

Serial No.: 09/107,237

Filed: June 30, 1998

In re Application of: Herrod et al.

For: AUTOMATIC TRANSFER OF DATA FROM AN INPUT DEVICE TO
A SOFTWARE APPLICATION

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Tina Bounds

BRIEF ON APPEAL

Director of Patents
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Sirs:

This is a Brief for consideration by the Board of the final rejection in an Office Action dated 16 July 2002. The Office action includes final rejections of claims 1-16 and 33-48 (All pending claims) of this pending application. A timely Notice of Appeal was filed on 16 October 2002.

REAL PARTY IN INTEREST

The only real party of interest regarding the present application is Symbol Technologies assignee of the present Application. An assignment of this invention

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Tina Bounds

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Sir:

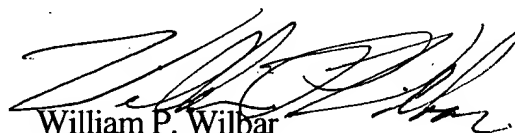
Enclosed please find a Notice of Appeal from the Examiner to the Board of Patent Appeals and Interferences form from the decision of the Primary Examiner dated July 16, 2002 finally rejecting claims 1-16 and 33-48 in the above captioned application. Also enclosed is a check in the amount of \$320.00 for the fee of this Notice of Appeal (37 CFR 1.17(b)) for a large entity.

In the event any additional fee is required for filing the above-noted document, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing of attached document timely, the Assistant Commissioner is hereby authorized to charge the fee to our Deposit Account No.: 50-0612. A duplicate copy of this page is enclosed.

Respectfully submitted,
Sierra Patent Group, Ltd.

Dated: October 16, 2002

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to Symbol Technologies Inc. from the inventors was recorded with the United States Patent and Trademark office on 28 September 1998.

RELATED APPEALS AND INTERFERENCES

To the best of Appellants' knowledge, no pending appeals or interferences directly affect or are directly affected by the decision of this Appeal by the Board.

STATUS OF THE CLAIMS

The application of this invention was filed with 64 claims. In a telephone conversation on 8 November 2001, Appellants elected to prosecute claims 1-16 and 33-48. Claims 17-32 and 49-64 were removed from consideration. Therefore, Claims 1-16 and 33-48 remain pending.

STATUS OF AMENDMENTS

There were no amendments filed subsequent to the final rejection. Therefore, there are no amendments pending in this Application.

SUMMARY OF THE INVENTION

The present invention receives data read by a bar code reader. The data received from the bar code reader and an identification of the bar code reader is stored in a data entity. The data entity is a data object that is then passed to a software application. The identification then is used to associate the data in the data entity with an expected input of the software application.

More specifically, this invention provides a manner of receiving data from a bar code reader. (Page 10, lines 2-10) The received data is then stored in an entity related to the bar code reader. (Page 11, line 19- page 12, line 12). This data entity is a data object. The data in the object may be processed into a common format. (Page 12, line 4)

An identification of the bar code reader is then also stored in the entity. The entity is then transferred to a software application. (Page 20, lines 8-14). The identity information of the device in the entity is then used to associate the entity with a data field in the software application. Page 21, lines 9-16) The identity information may include information about time, position, temperature, humidity and past data flow through the system.

The software application may include one or more forms that receive data from one or more form objects. (Page 11, lines 12-18). The form objects include data selection criteria. The selection criteria may include information such as content of the data, format of the data, and identification information of the bar code reader. The data selection criteria in of the forms in the software application and the identity in the data object storing the input data from the bar code reader. (Page 18, lines 6-15) Each of the forms may be associated with one or more input requestors in the software application. (Page 13, lines 1-6). The forms may be controlled by form objects. Processing details of the data objects are not known to the form objects.

The transferring of the data may be performed by a data exchange mechanism. The data exchange mechanism may be provided by a dynamic data exchange, a component object model, object linking and embedding, a distributed component object model, or a common object broker remote access.

ISSUES

In the office Action dated 16 July 2002, the Examiner rejects claims 1-36 under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent Number 5,119,479 issued to Arai et al (Arai) in view of U.S. Patent Number 5,801,696 issued to

Roberts et al. (Roberts). The Examiner also states the correction to the specification have not been made.

Appellants assert that the Examiner has not satisfied the requirements for proving prima facie obviousness as required by case law and the MPEP. Specifically, Appellants assert that the Examiner has not provided a teaching of using a bar code reader. Appellants further assert that the Examiner has failed to provide a teaching of storing data received from a bar code reader in an entity. Further, even if the Examiner has found art that teaches all of the limitations of this invention, the Examiner has failed to provide evidence of a motivation to combine.

GROUPING OF THE CLAIMS

Appellants hereby elect the following groups for purpose of this Appeal. Group I includes claims 1-16 and Group II includes claims 33-48. Group I includes an independent method claim, claim 1, and claims dependent from claim 1. Therefore, if claim 1 is allowable, claims 2-16 in Group I are likewise allowable. Group II includes an independent claim, claim 33, to a computer system and dependent claims 34-48. Therefore, if claim 33 is allowable, all claims of group II are allowable.

ARGUMENT

35 U.S.C. § 103(a) Rejection

Requirements for Proving Prima Facie Obviousness

Case law and the MPEP require three basic criteria must be met To establish a *prima facie* case of obviousness in a rejection. The first criteria is that the rejection must include a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. The second criteria is that the combination must have a reasonable expectation of success. Finally, the third criteria requires that the prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in appellants' disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir.

1991). It is the burden of the Examiner to establish *prima facie* evidence that the three criteria are met by a rejection. See MPEP § 2142.

In this application, the Appellants contend that the Examiner has failed to establish *prima facie* obviousness of the claims. Specifically, Appellants assert that the examiner has not taught storing data in a data entity and has not taught receiving the data from a bar code reader. Furthermore, even if all of the elements are taught by the art cited in the rejection, the Examiner has not provided a sufficient motivation or suggestion to combine the references.

Teaching of All Claim Limitations

The Examiner must present art that teaches or suggests all of the claimed elements of a claim in order to prove *prima facie* obviousness of the claim. *In re Royka* 490 F.2d 981, 180 USPQ 580 (CCPA 1974). See also, MPEP § 2143.03.

No teaching of storing data from a bar code reader in an entity

Claim1 recites storing input data from a bar code reader in a data entity and storing identification information of the bar code reader in the data entity. The data entity is then transferred to the software application. As described in the specification, the data entity is a data structure in which the data is stored and passed to the software application. The data entity is an object or data class in an object oriented programming language. The use of an object or data class as an entity allows a programmer to easily configure and change a system since the workings of the object in manipulating the data do not need to be known to the programmer.

Arai does not teach the storing of the data in an entity or a data structure. Aria teaches a system for providing a rule based system that using a name associated with an input device for determining the use of data receive from a device by an application. See Abstract. In Aria, there is no mention of storing of the data in an entity and then transferring the entity to the application. In Arai, data is received from a device in a logical switching device. (See Col. 5, lines 10-16). The logical switching device then associates a name, stored in a table, with the data. (See col. 5, lines 11-12). The data us then passed to a UI execution device. (Col. 5, lines 17-19). The UI execution device identifies the name associated with the data. (Col. 5, lines 17-19). The rules for the name are then retrieved from a data store. (Col. 5, lines 19-25). The data store stores rules for operations to be performed on the data based upon each name. (Col. 5, lines 21-25). The operations for the particular name are then applied to the data to provide a control output. (Col. 5, lines 25-27). There is no mention in Arai of storing the data received in an entity. In fact there is no mention at all in the Arai reference that provides a data structure that is passed between software application. Arai merely teaches the type of data being transmitted.

In the office action, the Examiner states a data entity is taught in Col. 6, lines 18-29. In Col. 6, lines 18-23, the locking of a name to associate with data from a device is taught. The data transmitted to the UI execution in Arai is taught to have the form shown in Figure 7 and includes an input device name, an input operation name, cursor coordinates and a character. (See Col. 6 lines 24-29). There is no mention in Arai that the data is transmitted in a particular data

structure. The data transmitted only contains the information described. There is no teaching that the data is stored in any type of data structure or transmitted in any type of data structure.

For these reasons, the Appellants believe that the Examiner has failed to provide a teaching of the limitation of storing the data from a bar code reader in an entity. Therefore, a *prima facie* showing of obviousness has not been made with regards to claim 1. Thus, the rejection to claim 1 must be removed.

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending from the independent claim is non-obvious. *In re* Fine 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). See also MPEP § 2143.03. Claims 2-16 are dependent from claim 1. Therefore, claims 2-16 are also allowable and the rejection to these claims must be removed.

Claim 33 recites a computer which includes a memory writer that stores data received from a bar code reader and an identity of the bar code reader in a data entity, a send that transmits the entity to a software application, and a matcher that associates the data entity with a data field. The Examiner states that Arai teaches the storing of data received from a bar code reader and an identity of the bar code reader in a data entity.

Arai does not teach the storing of the data and identity in an entity or a data structure by a memory writer. Arai teaches a system for providing a rule based

system that using a name associated with an input device for determining the use of data receive from a device by an application. See Abstract. In Aria, there is no mention of storing of the data in an entity by a memory writer and then transferring the entity to a software application by a sender. In Arai, data is received from a device in a logical switching device. (See Col. 5, lines 10-16) The logical switching device then associates a name, stored in a table, with the data. (See col. 5, lines 11-12) The data us then passed to a UI execution device. (Col. 5, lines 17-19) The UI execution device identifies the name associated with the data. (Col. 5, lines 17-19) The rules for the name are then retrieved from a data store. (Col. 5, lines 19-25) The data store stores rules for operations to be performed on the data based upon each name. (Col. 5, lines 21-25) The operations for the particular name are then applied to the data to provide a control output. (Col. 5, lines 25-27). There is no mention in Arai of storing the data received in an entity by a memory writer. In fact there is no mention at all in the Arai reference that provides a data structure or data entity that is passed between software application. Arai merely teaches the type of data being transmitted.

In the office action, the Examiner states a data entity is taught in Col. 6, lines 18-29. In Col. 6, lines 18-23, the locking of a name to associate with data from a device is taught. The data transmitted to the UI execution in Arai is taught to have the form shown in Figure 7 and includes an input device name, an input operation name, cursor coordinates and a character. (See Col. 6 lines 24-29) There is no mention in Arai that the data is transmitted in a particular data structure. The data transmitted only contains the information described. There is no teaching that

is no mention in Arai that the data is transmitted in a particular data structure. The data transmitted only contains the information described. There is no teaching that the data is stored in any type of data structure or transmitted in any type of data structure.

For these reasons, the Appellants believe that the Examiner has failed to provide a teaching of the limitation of a memory writer that stores the data from a bar code reader and the identity of a bar code reader in a data entity. Therefore, a *prima facie* showing of obviousness has not been made with regards to claim 33. Thus, the rejection to claim 33 must be removed.

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending from the independent claim is non-obvious. *In re Fine* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). See also MPEP § 2143.03. Claims 34- 48 are dependent upon amended claim 33. Therefore, claims 34-48 are allowable for at least the same reasons as amended claim 33. Other arguments as to the allowability of claims 34-48 are moot and omitted for brevity. For these reasons, Appellants request claims 34-48 be allowed.

No Teaching of a Bar Code Reader

Claim 1 is directed to storing data received from a bar code reader and an identity of a bar code reader in a data entity. Arai does not teach using the disclosed rule based system with a bar code reader. Arai states that the taught system may be used with a keyboard or other input device such as a mouse. (See

provide a bar code reader. However, Roberts does not specifically teach a bar code reader. Instead, Roberts teaches a keyboard like device. (See Col. 5, line 50).

In Roberts, a "keyboard like device" is defined as a device that sends a stream of characters input into the system. (Col. 5, line 51). Examples of keyboard like devices include keyboards and a speech recognition device that may turn spoken words into sequences of keystrokes. (Col. 5 lines 52-54) For each "keyboard-like device" a queue handles the keystrokes in a FIFO manner. (See Col. 5, lines 55-58). A stream is a continuous input of data of indefinite length. For example, streaming data over the Internet means the continuous transfer of data of an undetermined length over time. From the example and the description, it is obvious that a keyboard like device is a device that provides keystrokes identifying characters over time and that the length of the stream of characters received is indefinite. The FIFO is needed to ensure that all of the characters input are received and processed. Further, a human user inputs the data with the "keyboard-like" device using either typed keystrokes or spoken words.

A bar code reader, on the other hand, does not receive a stream of data. Instead, a bar code reader scans a bar code and converts the code to a string of alphanumeric characters. Every input from a bar code reader will be a string of characters of a certain, predetermined length. Therefore, the FIFO buffer and other circuitry that is taught to ensure capturing all of the input data is not needed to receive and handle the characters from the bar code reader. Furthermore, no human interaction is needed to provide the input from a bar code reader. Many

bar code readers are used in conveyor and other automated systems to identify objects passing the bar code reader. One skilled in the art would recognize that different circuitry and programming would be needed to receive data from a "keyboard-like device" described by Roberts and a bar code reader. Thus Roberts does not teach a bar code reader as claimed in claim 1. Therefore, the Examiner has failed to teach storing data received from a bar code reader and the rejection to claim 1 must be removed.

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending from the independent claim is non-obvious. *In re Fine* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). See also MPEP § 2143.03. Claims 2-16 are dependent from claim 1. Therefore, claims 2-16 are also allowable and the rejection to these claims must be removed.

Claim 33 recites a memory writer that stores data received from a bar code reader in a data entity. Arai does not teach using the disclosed the rule based system with a bar code reader. Arai states that the taught system may be used with a keyboard or other input device such as a mouse. (See Col. 1, lines 15-22). To teach a bar code reader, the Examiner relies on Roberts to provide a bar code reader. However, Roberts does not specifically teach a bar code reader. Instead, Roberts teaches a keyboard like device. (See Col. 5, line 50).

In Roberts, a "keyboard like device" is defined as a device that sends a stream of characters input into the system. (Col. 5, line 51). Examples of keyboard

like devices include keyboards and a speech recognition device that may turn spoken words into sequences of keystrokes. (Col. 5 lines 52-54) For each "keyboard-like device" a queue handles the keystrokes in a FIFO manner. (See Col. 5, lines 55-58). A stream is a continuous input of data of indefinite length. For example, streaming data over the Internet means the continuous transfer of data of an undetermined length over time. From the example and the description, it is obvious that a keyboard like device is a device that provides keystrokes identifying characters over time and that the length of the stream of characters received is indefinite. The FIFO is needed to ensure that all of the input characters are received and processed. Further, a human user inputs the data with the "keyboard-like" device using either typed keystrokes or spoken words.

A bar code reader, on the other hand, does not receive a stream of data. Instead, a bar code reader scans a bar code and converts the code to a string of alphanumeric characters. Every input from a bar code reader will be a string of characters of a certain, predetermined length. Therefore, the FIFO buffer and other circuitry that is taught to ensure capturing all of the input data is not needed to receive and handle the characters from the bar code reader. Furthermore, no human interaction is needed to provide the input from a bar code reader. Many bar code readers are used in conveyor and other automated systems to identify objects passing the bar code reader. One skilled in the art would recognize that different circuitry and programming would be needed to receive data from a "keyboard-like device" described by Roberts and a bar code reader. Thus Roberts does not teach storing data from a bar code reader as claimed in claim 33.

Therefore, the Examiner has failed to teach a memory writer that stores data received from a bar code reader and the rejection to claim 33 must be removed.

If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending from the independent claim is non-obvious. *In re Fine* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). See also MPEP § 2143.03. Claims 34-48 are dependent upon amended claim 33. Therefore, claims 34-48 are allowable for at least the same reasons as amended claim 33. Other arguments as to the allowability of claims 34-48 are moot and omitted for brevity. For these reasons, Appellants request claims 34-48 be allowed.

Lack of Motivation to combine

Furthermore, even if the Examiner has provided teachings of every limitations of the claims in the rejections, the Examiner has failed to establish *prima facie* obviousness because the Examiner has failed to provide the criteria of a proper motivation or suggestion to combine the references. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also, MPEP § 2143. Obviousness can only be established by combining or modifying the teaching of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Kotzab*, 217 F.3d 1365, 1370. See also MPEP § 2143.01. This teaching or suggestion to make the combination and a reasonable expectation of success, must both be found in the prior art and not in the appellants'

disclosure. See *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). The Examiner has merely made an assertion of motivation or suggestion to combine the references in the rejections and has not provided evidence of a rationale to do so.

In regards to the rejection of claim 1, the Examiner states that one skilled in the art would combine the references because Roberts recognized input from various peripheral devices may be handled through the same input event dispatching entity. Roberts does not teach input from various input devices may be handled by the same input event entity. Instead, Robert teaches that inputs devices may be categorized as either a pointing device or non-pointing device and input from these devices must be handled in different manners. (See Col. 5, line 50- Col. 6, line 7). The input from "keyboard-like" devices and pointing device are handled differently in Roberts. This is a direct contradiction of the Examiner's assertion that Roberts teaches all input device may be handled by the same entity. One skilled in the art would conclude from reading Roberts that different device require different handling. Thus, there is no evidence of a motivation to combine the references and the rejection must be removed.

If there is no motivation to combine the references for claim 1, there is no motivation to combine the references for claims 2-16. Thus, the rejections to claims 2-16 must be removed.

The argument for lack of motivation or suggestion to combine the reference for claim 1 also applies to the rejection of claim 33. Thus, the rejection of claim 33 must be removed for the same reason as the rejection to claim 1.

The argument for lack of motivation or suggestion to combine the reference for claim 1 also applies to the rejection of claim 33. Thus, the rejection of claim 33 must be removed for the same reason as the rejection to claim 1.

If there is no motivation or suggestion to combine the references for the rejection of claim 33, there is no motivation or suggestion to combine the references for the rejections of claims 34-48. Therefore, the rejections to claims 34-48 must be removed.

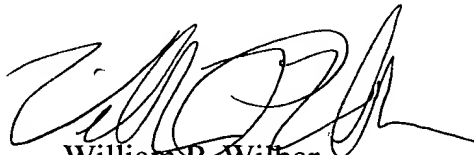
Conclusion

For the above reasons, Appellants believe the Examiner has not provided evidence of prima facie obviousness of claims 1-16 and 33-48. Therefore, Appellants respectfully request that the Board remove the rejections of all claims and allow this case.

Respectfully submitted,
Sierra Patent Group, Ltd.

Dated: December 18, 2002

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APPENDIX

1. A method for transferring data from a bar code reader to a software application having one or more data field, including the steps of:

storing data from a bar code reader in an entity;

storing identification information regarding the bar code reader of the data in said entity;

transferring said entity to the software application; and

associating said entity with a data field in the software application based on said identification information.

2. The method of claim 1, further including the step of:

forming a data object from said entity.

3. The method of claim 2 wherein the software application includes one or more forms, each of said forms designed to receive one or more form objects, each of said form objects containing a data selection criteria.

4. The method of claim 3, wherein said transferring step includes the step of:

routing said data object to one of said form objects, said form object chosen based on said data selection criteria and said identification information.

5. The method of claim 3, wherein said form objects associated with a specific form collectively describe the data input requirements for said form.

6. The method of claim 1, wherein said identification information includes information chosen from the group consisting of time, position, temperature, humidity, and indications of the past history of data flow through the system.

7. The method of claim 3, wherein the software application further includes one or more input requestors, each of said forms associated with one of said input requestors.

8. The method of claim 3, wherein said selection criteria specifies conditions for using said data object to satisfy the input requirements of one of said form objects.

9. The method of claim 3, wherein said selection criteria is based on information chosen from the group consisting of the content of the data, the format of the data, and said identification information.

10. The method of claim 3, further including the step of processing the data in said data object.

11. The method of claim 10, wherein the processing details of said data object are not known the form object.

12. The method of claim 1, wherein said transferring step is performed by an operating system.

13. The method of claim 1, wherein said transferring step further includes the step of:

sending the data to a data exchange mechanism.

14. The method of claim 13, wherein said data exchange mechanism is chosen from a set consisting of a dynamic Data exchange (DDE), a component object model (COM), an object linking and embedding (OLE), a distributed component object model (DCOM) and a common object broker remote access (COBRA).

15. The method of claim 1, wherein said transferring step includes operations chosen from the group consisting of operation sequencing, data translation, process synchronization, content filtering, and path routing.

16. The method of claim 1 wherein said transferring step is accomplished using component objects.

33. A computer system for transferring data from a bar code reader to a software application having one or more data fields, including:

a memory writer which stores the data from the bar code reader in an entity and stores identification information regarding the bar code reader of the data in said entity;

a sender which transfers said entity to the software application; and

a matcher which associates said entity with a data field in the software application based on said identification information.

34. The computer system of claim 33 further including:

an entity modifier which forms a data object of said entity.

35. The computer system of claim 33, wherein the software application further includes one or more forms, each of said forms designed to receive one or more form objects containing a data selection criteria.

36. The computer system of claim 35, wherein said sender includes:

a router which routes said data object to one of said form objects, said form object chosen based on said data selection criteria and said identification information.

37. The computer system of claim 35, wherein said form objects associated with a specific form collectively describe the data input requirements of said form.

38. The computer system of claim 33, wherein said identification information includes information chosen from the group consisting of time, position, temperature, humidity, and indications of past history of data flow through the system.

39. The computer system of claim 35, wherein the software application further includes one or more input requestors, each of said form objects associated with one of said input requestors.

40. The computer system of claim 35, wherein said selection criteria specifies conditions for using said data object to satisfy the input requirements of one of said form objects.

41. The computer system of claim 35, wherein said selection criteria is based on information chosen from the group consisting of the content of the data, the format of the data, and said identification information.

42. The computer system of claim 35, further including a processor which processes the data in said data object.

43. The computer system of claim 42, wherein the processing details of said data object are not known to said form object.

44. The computer system of claim 33, wherein said sender is contained within an operating system.

45. The computer system of claim 33, wherein said sender is contained within an operating system.

46. The computer system of claim 45, wherein said data exchange mechanism is chosen from the set consisting of a dynamic data exchange (DDE), a component object model (COM), object linking and embedding (OLE), a distributed component object model (DCOM), and a common object broker remote access (COBRA).

47. The computer system of claim 33, wherein said sender includes:
a sender which performs operations chosen from the group consisting of operation sequencing, data translation, process synchronization, content filtering, and path routing.

48. The computer system of claim 33, wherein said sender includes:
a sender which transfers said entity to the software application using component objects.